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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,350	12/12/2001	Scott A. Arvin	30566.184-US-01	8935

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EXAMINER

NGUYEN, KIMBINH T

ART UNIT	PAPER NUMBER
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2671

DATE MAILED: 09/25/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/020,350

Applicant(s)

ARVIN, SCOTT A.

Examiner

Kimbinh T. Nguyen

Art Unit

2671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-21 are pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6-11, 13, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (5,588,098).

Claim 1, Chen et al. discloses direct manipulation of an 3D object displayed in a 3D representation (col. 2, lines 39-40), comprising: displaying a 3D geometric object (col. 5, lines 30-32); displaying a first oriented 3D glyph (a reference indicator such as a cursor that is display on the video display, col. 4, lines 54-61) that provides a direct visual indication of valid movement direction during manipulating 3D object (fig. 11). Chen does not teach a 3D glyph; however, Chen teaches reference indicator to activate a predefined control movement type and direction of available object manipulation (col. 19, lines 63-67; col. 20, lines 40-43; fig. 11). This feature related to a 3D glyph that provides a direct indication of movement direction during manipulating. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the reference indicator as taught by Chen for displaying a 3D glyph that

provides a direct indication during manipulating, because it would provide an improved technique for manipulation of displayed 3D objects which provides the user with visual clues (3D glyph or reference indicator) as to the manipulations available (col. 2, lines 59-62).

Claim 2, Chen et al. discloses the valid movement direction is a constraint on a permissible action (a gridding capability is provided whereby movements would be constrained along box coordinate system axes so as to stay on the intersections of a 3D grid; col. 15, lines 25-28).

Claim 3, Chen et al. discloses the first oriented 3D glyph is a grip that defined position and an active area (active zone) within a pointing device will snap to that position (clicking the pointed in any one of these active zones and dragging will result in moving, rotating, or scaling the bounding box; col. 7, lines 10-14).

Claim 4, Chen et al. discloses an orientation and direction of the first oriented 3D glyph indicate how cursor movement will be constrained (moving, scaling, or rotating, is constrained to only one or two of the three possible axes of the 3D object; col. 9, line 63 through col. 10, line 2).

Claim 6, Chen et al. discloses the direct manipulation occurs through user interaction with the computer drawing program (col. 7, lines 30-42).

Claim 7, Chen et al. discloses manipulating the 3D object based on direct manipulation of the first oriented 3D glyph in the valid movement direction. (desired direction, col. 6, lines 21-24; col. 8, lines 20-22).

Claims 8-11, 13, 14, the rationale provided in the rejection of claims 1-4, 6, 7 is incorporated herein.

4. Claims 5, 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (5,588,098) in view of Isensee et al. (5,734,805).

Claim 5, Chen et al. does not teach displaying a second oriented 3D glyph on 3D object, wherein the second oriented 3D glyph is differentiable from the first oriented 3D glyph; however, Isensee et al. teaches when an object moves, a changing of the appearance of a cursor 26 in a first image 19 and a second image 19 of figs 6-8, see col. 6, lines 8-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the changing of the appearance of the cursor (3D glyph) when object moving through the 3D space as taught by Isensee into the direct manipulation of a 3D object of Chen's teaching for provide changing of oriented 3D glyph, because it would provide a method for controlling the dimensional appearance of an image on a display device (col. 1, lines 8-9).

Claims 15-21, the rationale provided in the rejection of claims 1-7 is incorporated herein. In addition, Isensee et al. teaches a program storage medium readable by a computer to perform a method (col. 9, lines 29-32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the program storage medium readable by a computer as taught by Isensee into the direct manipulation of a 3D object of Chen's teaching for provide a computer product of manufacturing, because it would provide a technique for computer assisted design and

Art Unit: 2671

manufacturing, graphical shells for operating system such as multimedia programs, virtual reality programs and video games (col. 1, lines 18-22).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Jensen et al. (6,038,575) discloses method of sharing glyphs between computers having graphical user interfaces.
- Peterson 95,519,818) discloses object-oriented graphic picking.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kimbinh Nguyen** whose telephone number is **(703) 305-9683**. The examiner can normally be reached **(Monday- Thursday from 7:00 AM to 4:30 PM and alternate Fridays from 7:00 AM to 3:30 PM)**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman, can be reached at (703) 305-9798.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

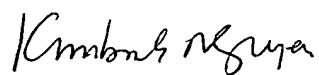
(703) 872-9314 (for Technology Center 2600 only)

Art Unit: 2671

Hand-delivered responses should be brought to Crystal Part II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the Technology Center 2600 Customer Service Office
whose telephone number is (703) 306-0377.

September 22, 2003



Kimbinh Nguyen

Patent Examiner AU 2671